

REMARKS

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of June 11, 2010. Claims 1-10, 13-17, and 20-25 are pending in this application. Claims 1, 9, 13, 16, and 21 are amended. Claims 11-12 and 18-19 are cancelled.

Reconsideration and reexamination of the Application are requested in view of the comments and amendments herein.

I. The Office Action

Claims 1-4, 7, 9-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,532,351 to Richards et al. (hereinafter "Richards") in view of U.S. Patent Application Publication No. 2004/0080775 to Owen et al. (hereinafter "Owen") in further view of U.S. Patent No. 5,930,553 to Hirst et al. (hereinafter "Hirst") in further view of U.S. Patent No. 7,146,412 to Turnbull (hereinafter "Turnbull") and in further view of U.S. Patent Application Publication No. 2004/004500 to Hara (hereinafter "Hara").

Claims 5-6, and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Richards in view of Owen in further view of Hirst and in further view of Turnbull in further view of Hara and in further view of well-known art.

Claims 16-22 are rejected under 35 U.S.C. § 103 as being unpatentable over Richards in view of Owen in further view of U.S. Patent No. 7,262,873 to Rasche et al. (hereinafter "Rasche") in further view of U.S. Patent Application Publication No. 2003/00763305 to McIntyre (hereinafter "McIntyre") in further view of Hirst in further in view of Turnbull and in further view of Hara.

Claims 23-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Richards in view of Owen in further view of Rasche in further view of McIntyre in further view of Hirst in further view of Turnbull in further view of Hara and in further view of well known art.

II. The Subject Claims Distinguish Patentably Over the References of Record

Independent claim 1, and similarly independent claims 9 and 16, is directed to a replaceable module for a printing apparatus with programmable software controls. The replaceable module comprises an internal memory for holding stored instructions, a peripheral memory holding a software upgrade for the printing apparatus programmable software controls,

a communications interface for exchanging information with the printing apparatus, and a microprocessor connected to the internal memory, the peripheral memory and the communications interface. The microprocessor, among other things, performs instructions stored in the internal memory to compare currently installed software and current machine status with available software upgrades to determine if the software upgrade is appropriate, and automatically implements the upgrade or schedules a time in the future to implement the upgrade, if needed. Applicant respectfully submits that the cited references fail to teach or suggest the subject invention as presently claimed.

Particularly, the Office Action submits that Richards teaches a replaceable module for a printing apparatus with an internal memory for holding instructions. However, Richards teaches a customer replaceable unit monitor, or CRUM, includes non-volatile memory that retains data relevant to the function and performance of the module. As amended, claim 1 specifically recites that the internal memory includes both non-volatile and volatile memory. Richards fails to consider including a volatile memory portion. Unlike non-volatile memory, volatile memory only maintains information as long as the power remains on. The presently claimed invention implements the benefits of both types of memory, the speed of volatile memory, and the storage retention of non-volatile memory, not taught or suggested by Richards.

The Office Action acknowledges that Richards fails to teach that a module additionally comprising a peripheral memory holding a software upgrade for the printing apparatus programmable software controls. However, the Office Action submits that Owen teaches a replaceable module that includes a microprocessor connected to an internal memory, a peripheral memory, and a communications interface. Applicant respectfully disagrees, and submits that Owen recites a replaceable component having a memory component 146 that comprises at least one storage area, which may comprise a replaceable component usage data and an end-of-life status, which can be used to store acknowledgement of the end of a serviceable life for at least the one supply. That the end-of-life status component of the memory tag; however, is not a peripheral memory that externally provides larger memory storage for use during software upgrades. There is no teaching or slight suggestion in Owen that indicates the end-of-life status memory component has increased storage space of any kind, and particularly not software upgrades.

The Office Action further maintains that Hirst teaches a module additionally comprising a peripheral memory holding a software upgrade for the printing apparatus programmable software controls, and microprocessor connected to the peripheral memory that performs the stored instructions to compare currently installed software and current machine status with available software upgrades, independent of whether said module has been replaced, to determine if the software upgrade is appropriate for installation and if an upgrade is appropriate, then install the software upgrade into the printing apparatus via the communications interface when the replaceable module is installed in the printing apparatus by causing said printing apparatus to idle, upgrading software by extracting necessary components from a web based source or from an internal memory source, monitor progress of the upgrade, report any faults, contact service personnel if the upgrades is not successfully completed, and return the printing apparatus to normal operation when the software upgrade is complete so that the software upgrade for the printing apparatus is inhibited from being repeated. Applicant respectfully maintains that the interpretation of Hirst in the Office Action is improper.

Preliminarily, Applicant submits that the claims have been amended to specify that the peripheral memory is external to the replaceable module. As illustrated in Figure 8, this peripheral memory is completely outside and separate from the module, unlike the internal memory. The consumable memory device of Hirst is similar to the internal memory, such that it is contained within the toner cartridge. Accordingly, Applicant submits the Hirst fails to teach or suggest a peripheral memory, external to the replaceable module, with increased storage space for holding a software upgrade for the printing apparatus programmable software controls as presently claimed.

Additionally, as set forth in the previous Response, Hirst specifically teaches that **a software upgrade is triggered at the time a consumable is replaced**. The Office Action acknowledges that Hirst fails to teach that such software upgrade triggers are independent of whether a replaceable module has been replaced as currently claimed; however, cites Turnbull as teaching a module for printing apparatus with programmable software controls comprising a microprocessor connected to a peripheral memory that performs stored instructions to compare currently installed software with available software upgrades independent of whether the module has been replaced to determine if the software upgrade is appropriate. Applicants respectfully traverse.

Particularly, Turnbull is directed to an applet or upgrade module that is implemented in a computing device. The applet is configured to determine if a firmware upgrade is needed and if so, to send an email notification or alert to one or more pre-designated email addresses to notify a user when an available upgrade is located. An email recipient is then required to select an option to implement the upgrade, and may specify a certain time for the upgrade to take place. In contrast, the presently claimed invention is directed to automatically scheduling available software upgrades, without the need for user intervention. Specifically, once an upgrade is identified, the microprocessor analyzes the machine to determine if the upgrade can be installed immediately, or if it is necessary to wait for a more suitable time. As explained in paragraph [0042], the replaceable module may keep a fleet of machines out in the field properly up to date as to software control upgrades without the need for user intervention, such as sending a field engineer representative to the customer site. Applicant submits that Turnbull does not teach or suggest such an automatic upgrade procedure, free of user involvement.

The Office maintains use of Hara as teaching monitoring progress of the upgrade, reporting any faults, and contacting service personnel if the upgrades are not successfully completed, although Applicants previously argued against the use of Hara on the grounds that Hara is directed to non-analogous art that is not either in the field of Applicant's endeavor or reasonably pertinent to the particular problem with which Applicant was concerned. Particularly, Hara is directed to software licensing management system and method intended to protect the licensees of software packages and prevent the use of illegally copied software. The system makes it possible to replace a terminal on which a software product is used within the scope of a current software license agreement while preventing illegal copying of the software. The Examiner recites that since Hara discloses downloading and installing software packages into apparatuses and monitoring the progress and faults of the process to the user, one skilled in the art would have been inclined to look into the areas of art such as Hara. Applicant respectfully submits, that simply because Hara broadly refers to installing software packages and monitoring this process does not change the fact that one skilled in the art would not be inclined to look to the teachings of Hara when faced with the particular problem presented in the presently claimed invention, specifically providing a replaceable module capable of automatically locating and implementing programmable software control upgrades.

Additionally, the Examiner argues that any judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, so long as it only takes into account knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned from Applicant's own disclosure. However, Applicant submits that the support provided for the combination of Richards, Owen, Hirst, Turnbull, and Hara simply lists the benefits that would stem from such combinations. Applicant maintains that a list of various advantages of the proposed combination, without more, does not provide any basis as to why the combination of each reference would have been obvious at the time the presently claimed invention was made. Rather, this simply recites the advantages of the presently claimed invention, which is a blatant example of an improper use of hindsight reasoning to recreate the presently claimed invention by piecemeal. As stated by the Federal Circuit, "it is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. ... This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780 (Fed. Cir., 1992).

For at least the aforementioned reasons, Applicant submits that the subject claims distinguish patentably over the references of record. As such, Applicant respectfully requests that the rejections of claims 1-10, 13-17, and 20-25 be withdrawn.

CONCLUSION

For the reasons detailed above, it is submitted all remaining claims (Claims 1-10, 13-17, and 20-25) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	21	- 25 =	0
INDEPENDENT CLAIMS	3	- 3 =	0

This is an authorization under 37 CFR 1.136(a)(3) to treat any concurrent or future reply, requiring a petition for extension of time, as incorporating a petition for the appropriate extension of time.

The Commissioner is hereby authorized to charge any filing or prosecution fees which may be required, under 37 CFR 1.16, 1.17, and 1.21 (but not 1.18), or to credit any overpayment, to Deposit Account 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call the undersigned, at Telephone Number (216) 363-9000.

Respectfully submitted,

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 Date